

Rooke, A.
101762588

10/762588

FILE 'REGISTRY' ENTERED AT 12:16:41 ON 13 FEB 2006
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2006 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES: 12 FEB 2006 HIGHEST RN 874108-28-8
DICTIONARY FILE UPDATES: 12 FEB 2006 HIGHEST RN 874108-28-8

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2005

Please note that search-term pricing does apply when
conducting SmartSELECT searches.

*
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added, *
* effective March 20, 2005. A new display format, IDERL, is now *
* available and contains the CA role and document type information. *
*

Structure search iteration limits have been increased. See HELP SLIMITS
for details.

REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of
experimental property data in the original document. For information
on property searching in REGISTRY, refer to:

<http://www.cas.org/ONLINE/UG/regprops.html>

L1 10 S HLIHNVHKEEHAHAHN/SQSP

L1 ANSWER 1 OF 10 REGISTRY COPYRIGHT 2006 ACS on STN
RN 484824-25-1 REGISTRY
CN GenBank CAA37824 (9CI) (CA INDEX NAME)
OTHER NAMES:
CN GenBank CAA37824 (Translated from: GenBank X53828)
CI MAN
SQL 332

SEQ 1 MSLKDHLIHN VHKEEHAHAH NKISVVGVA VGMACAISIL MKDLADELTL
===== =
51 VDVVEDKLGK EMLDLQHGS LFLKTPKIISG KDYSVTAHSK LVIVTAGARQ
101 QEGESRLNLV QRNVNIFKFI IPNVVKYSPD CKLLIVSNPV DILTYVAWKI
151 SGFPKHRVIG SGCNLD SARF RHLMGERLGI HPLSCHGWIV GEHGDSSVPV
201 WSGVNVAGVS LKALHPDMGT DADKEHWKEV HKQVVD SAYE VIKLKGYTSW
251 AIGLSVADLA ETIMKNLRRV HPISTAVKGM HGIKDDVFLS VPCVLGSSGI
301 TDVVKMILKP DEEEKIKKSA DTLWGIQKEL QF
HITS AT: 6-21

RELATED SEQUENCES AVAILABLE WITH SEQLINK

Searcher : Shears 571-272-2528

10/762588

L1 ANSWER 2 OF 10 REGISTRY COPYRIGHT 2006 ACS on STN
RN 484053-89-6 REGISTRY
CN L-Lysine, L-methionyl-L-lysyl-L- α -aspartyl-L-histidyl-L-leucyl-L-isoleucyl-L-histidyl-L-asparaginyl-L-valyl-L-histidyl-L-lysyl-L- α -glutamyl-L- α -glutamyl-L-histidyl-L-alanyl-L-histidyl-L-alanyl-L-histidyl-L-asparaginyl- (9CI) (CA INDEX NAME)

OTHER NAMES:

CN 11: PN: JP2005095079 SEQID: 11 unclaimed sequence
CN 1: PN: JP2003009877 SEQID: 1 claimed protein
CN 1: PN: JP2003009880 SEQID: 1 claimed protein
CN 27: PN: JP2005095083 SEQID: 27 unclaimed sequence
CN Peptide (chicken muscle lactate dehydrogenase N-terminal fragment)
SQL 20

SEQ 1 MKDHLIHNHVH KEEHAHAHNK
=====

HITS AT: 4-19

REFERENCE 1: 142:387959

REFERENCE 2: 142:387958

REFERENCE 3: 138:84441

REFERENCE 4: 138:84439

L1 ANSWER 3 OF 10 REGISTRY COPYRIGHT 2006 ACS on STN
RN 475131-37-4 REGISTRY
CN 8: PN: US20020164718 FIGURE: 2 unclaimed sequence (9CI) (CA INDEX NAME)
CI MAN
SQL 280

SEQ 1 MTMITPSLKD HLIHNHVHKEE HAAHNKIDI VGGSDSREGA WPWVVALYFD
=====

51 DQQVCGASLV SRDWLVSAAH CVYGRNMEPS KWKAVLGLHM ASNLTSPQIE
101 TRLIDQIVIN PHYNKRRKNN DIAMMHLEMK VNYTDYIQPI CLPEENQVFP
151 PGRICSIAGW GALIYQGSTA DVLQEADVPL LSNEKCQQQM PEYNITENMV
201 CAGYEAGGVD SCQGDGGGPL MCQENNRWLL AGVTSFGYQC ALPNRPGVYA
251 RVPRFTEWIQ SFLHELVISX EFTGRRFTTS

HITS AT: 11-26

REFERENCE 1: 137:365958

L1 ANSWER 4 OF 10 REGISTRY COPYRIGHT 2006 ACS on STN
RN 474426-21-6 REGISTRY
CN L-Asparagine, L-histidyl-L-leucyl-L-isoleucyl-L-histidyl-L-asparaginyl-L-valyl-L-histidyl-L-lysyl-L- α -glutamyl-L- α -glutamyl-L-histidyl-L-alanyl-L-histidyl-L-alanyl-L-histidyl- (9CI) (CA INDEX NAME)

OTHER NAMES:

CN 1: PN: US20020164718 PAGE: 13 claimed protein
CN 1: PN: US20040180415 SEQID: 1 unclaimed sequence
CN 1: PN: WO03000708 PAGE: 15 unclaimed sequence
SQL 16

SEQ 1 HLIHNHVHKEE HAAHN
=====

HITS AT: 1-16

REFERENCE 1: 141:273989

REFERENCE 2: 138:69467

REFERENCE 3: 137:365958

L1 ANSWER 5 OF 10 REGISTRY COPYRIGHT 2006 ACS on STN

RN 259678-66-5 REGISTRY

CN L-Lysine, L-lysyl-L- α -aspartyl-L-histidyl-L-leucyl-L-isoleucyl-L-histidyl-L-asparaginyl-L-valyl-L-histidyl-L-lysyl-L- α -glutamyl-L- α -glutamyl-L-histidyl-L-alanyl-L-histidyl-L-alanyl-L-histidyl-L-asparaginyl- (9CI) (CA INDEX NAME)

SQL 19

SEQ 1 KDHLIHNVHK EEHAHAHNK

=====

HITS AT: 3-18

REFERENCE 1: 141:345966

REFERENCE 2: 132:177550

L1 ANSWER 6 OF 10 REGISTRY COPYRIGHT 2006 ACS on STN

RN 250676-82-5 REGISTRY

CN 2: PN: WO9957992 SEQID: 2 unclaimed protein (9CI) (CA INDEX NAME)

CI MAN

SQL 278

SEQ 1 MTMITPSLSL KDHLIHNVHK EEHAHAHNKI SVVGVGAVGP VSKGEELFTG

=====

51 VVPILVELDG DVNGHKFSVS GEGEGDATYG KLTLKFICTT GKLPVPWPTL
101 VTTFSYGVQC FSRYPDHMKR HDFFKSAMPE GYVQERTISF KDDGNYKTRA
151 EVKFECDTLV NRIELKGIDF KEDGNILGHK LEYNYNSHNV YITADKQKNG
201 IKANFKIRHN IEDGSVQLAD HYQQNTPIGD GPVLLPDNHY LSTQSALSKD
251 PNEKRDMVL LEFVTAAGIT HGMDELYK

HITS AT: 13-28

REFERENCE 1: 131:348793

L1 ANSWER 7 OF 10 REGISTRY COPYRIGHT 2006 ACS on STN

RN 250662-75-0 REGISTRY

CN 5: PN: WO9957992 SEQID: 5 unclaimed protein (9CI) (CA INDEX NAME)

CI MAN

SQL 45

SEQ 1 MTMITPSLKD HLIHNVHKEE HAHAHNKIDD DDKVDGSPGT ELVIS

=====

HITS AT: 11-26

REFERENCE 1: 131:348793

L1 ANSWER 8 OF 10 REGISTRY COPYRIGHT 2006 ACS on STN

RN 250266-36-5 REGISTRY

CN L-Methionine, L-seryl-L-leucyl-L-lysyl-L- α -aspartyl-L-histidyl-L-leucyl-L-isoleucyl-L-histidyl-L-asparaginyl-L-valyl-L-histidyl-L-lysyl-L- α -glutamyl-L- α -glutamyl-L-histidyl-L-alanyl-L-histidyl-L-alanyl-L-histidyl-L-asparaginyl-L-lysyl-L-isoleucyl-L-seryl-L-valyl-L-valylglycyl-L-valylglycyl-L-alanyl-L-valylglycyl- (9CI) (CA INDEX

10/762588

NAME)
SQL 32

SEQ 1 SLKDHLIHNV HKEEHAHAHN KISVVGAV GM

HITS AT: 5-20

REFERENCE 1: 131:348793

L1 ANSWER 9 OF 10 REGISTRY COPYRIGHT 2006 ACS on STN
RN 133556-98-6 REGISTRY
CN Dehydrogenase, lactate (chicken isoenzyme A reduced) (9CI) (CA INDEX
NAME)
CI MAN
SQL 332

SEQ 1 MSLKDHLIHN VHKEEHAHAH NKISVVGVA VGMACAISIL MKDLADELTL

===== =
51 VDVVEDKLLKG EMLDLQHGSF FLKTPKIISG KDYSVTAHSLK LVIVTAGARQ
101 QEGESRLNLVQ QRNVNIFKFI IPNVVKYSPD CKLLIVSNPV DILTYVAWKI
151 SGFPKHRVIG SGCNLD SARF RHLMGERLGI HPLSCHGWIV GEHGDSSVPV
201 WSGVNVAGVS LKALHPDMGT DADKEHWKEV HKQVVD SAYE VIKLKGYSWA
251 AIGLSVADLA ETIMKNLRRV HPSTAVKGM HGIKDDVFLS VPCVLGSSGI
301 TDVVKMILKP DEEEKIKKSA DTLWGIQKEL QF

HITS AT: 6-21

RELATED SEQUENCES AVAILABLE WITH SEQLINK

REFERENCE 1: 114:200707

L1 ANSWER 10 OF 10 REGISTRY COPYRIGHT 2006 ACS on STN
RN 68939-01-5 REGISTRY
CN Dehydrogenase, lactate (chicken muscle subunit M protein moiety
reduced) (9CI) (CA INDEX NAME)
CI MAN
SQL 331

SEQ 1 SLKDHLIHNV HKEEHAHAHN KISVVGAV GMACAISILM KDLADELTLV

===== =
51 DVVEDKLLKE MMDLQHGSF LKTPKITSGK DYSVTAHSLK VIVTAGARQ
101 EGESRLNLVQ RNVNIFKFII PNVVKYSPDC KLLIVSNPVD ILTYVAWKIS
151 GFPKHRVIGS GCNLD SARFR HLMGERLGIH PLSCHGWIVG QHGDSSVPVW
201 SGVNVAGVSL KALHPDMGTD ADKEHWKEVH KQVVD SAYEV IKLKGYSWA
251 IGLSVADLAE TIMKNLRRVH PISTAVKGMH GIKDDVFLSV PCVLGSSGIT
301 DVVKMILKPD EEEKIKKSAD TLWGIQKQLQ F

HITS AT: 5-20

REFERENCE 1: 90:50551

FILE 'CAPLUS' ENTERED AT 12:16:45 ON 13 FEB 2006
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2006 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications.

Searcher : Shears 571-272-2528

The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 13 Feb 2006 VOL 144 ISS 8
FILE LAST UPDATED: 12 Feb 2006 (20060212/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply. They are available for your review at:

<http://www.cas.org/infopolicy.html>

L2 12 L1

L2 ANSWER 1 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN

ED Entered STN: 14 Apr 2005

ACCESSION NUMBER: 2005:319749 CAPLUS

DOCUMENT NUMBER: 142:387959

TITLE: Production method of the mutation protein variant in cell-free protein translation system

INVENTOR(S): Umehara, Takashi; Matsumoto, Takehisa; Tanaka, Akiko; Yokoyama, Shigeyuki

PATENT ASSIGNEE(S): The Institute of Physical & Chemical Research Riken, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 22 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005095083	A2	20050414	JP 2003-334083	20030925
PRIORITY APPLN. INFO.:			JP 2003-334083	20030925

AB The protein engineering method of producing the mutation protein variant in cell-free protein translation system has been developed. The process includes the first PCR for preparing two dsDNA fragments with insertions of mutation and linker using the template DNA for the protein, primer A (forward primer plus linker) and primer S (reverse primer plus linker) and the second PCR using the two dsDNA fragments, the dsDNA containing transcription initiation site and the dsDNA containing transcription terminal site as the templates and sense- and -antisense primers. The primer A and the primer S reversely direct to the mutation site and have overlap sequences. The linear dsDNA prepared by the PCRs is designed to be used for producing mutation protein variant in cell-free protein translation system. The sets of primer Si and primer Ai+1 ($1 \leq i \leq p-1$, $i = \text{integer number}$) are used to prepare dsDNA fragments ($n = P + 1$) for introducing mutations to different sites ($n = P$). The PCR mutagenesis based on the claimed method for expressing the variants of budding yeast YJL115W protein was performed and the production of the variant proteins in the E. coli cell-free protein translation system was demonstrated. The claimed method can provide the technique of rapid preparation of variant proteins for X-ray multiple anomalous diffraction crystallog. and for the functional screening of the abnormal proteins encoded by polymorphic

genes.
 IT **484053-89-6**
 RL: PRP (Properties)
 (unclaimed sequence; production method of the mutation protein variant
 in cell-free protein translation system)

L2 ANSWER 2 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN
 ED Entered STN: 14 Apr 2005
 ACCESSION NUMBER: 2005:315728 CAPLUS
 DOCUMENT NUMBER: 142:387958
 TITLE: Preparation of carboxyl terminal-deleted protein
 variants in soluble form in cell free protein
 translation system
 INVENTOR(S): Umehara, Takashi; Matsumoto, Takehisa; Tanaka,
 Akiko; Yokoyama, Shigeyuki
 PATENT ASSIGNEE(S): The Institute of Physical & Chemical Research
 Riken, Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 19 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005095079	A2	20050414	JP 2003-333932	20030925
PRIORITY APPLN. INFO.:			JP 2003-333932	20030925

AB The methods to prepare carboxyl terminal-deleted protein variants in
 cell free protein translation system have been developed. The method
 includes the pausing of the transcription process (from the template
 DNA by RNA polymerase) by adding 3'-dNTP (3'-dATP, 3'-dGTP, 3'-dCTP or
 3'-dUTP) to produce the 3'-end truncated RNA encoding carboxyl
 terminal-deleted protein. The 3'-dNTP/NTP ratio for pausing is set to
 be 1 .apprx. 10 (more specifically 1 .apprx. 3):100 in the substrate
 mixture Alternative method includes the pausing of the DNA
 amplification process (from the template DNA by DNA polymerase) by
 adding 2',3'-ddNTP (2',3'-ddATP, 2',3'-ddGTP, 2',3'-ddCTP or
 2',3'-ddTTP) to produce the 3'-end truncated DNA and cognate RNA
 transcript encoding carboxyl terminal-deleted protein. The soluble
 protein variants can be selected among the proteins with C-terminal
 truncations that have been expressed in the cell free system and
 therefore the method can be used to identify the motifs involved in
 protein solubility Preparation of the C-terminal truncated protein in the

E.
 coli cell free translation system by the claimed method using
 2',3'-ddNTP in DNA truncation were demonstrated by using human SIIT1
 protein as an example.

IT **484053-89-6**
 RL: PRP (Properties)
 (unclaimed sequence; preparation of carboxyl terminal-deleted protein
 variants in soluble form in cell free protein translation system)

L2 ANSWER 3 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN
 ED Entered STN: 17 Sep 2004
 ACCESSION NUMBER: 2004:759732 CAPLUS
 DOCUMENT NUMBER: 141:273989
 TITLE: Purification of fusion proteins using immobilized

INVENTOR(S): bi-metal affinity chromatography
 Tchaga, Grigoriy S.; Jokhadze, George G.
 PATENT ASSIGNEE(S): USA
 SOURCE: U.S. Pat. Appl. Publ., 20 pp., Cont.-in-part of
 U.S. Pat. Appl. 2002 164,718.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 2
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004180415	A1	20040916	US 2004-762588	20040121
US 2002164718	A1	20021107	US 2001-858332	20010515
PRIORITY APPLN. INFO.:			US 2001-858332	A2 20010515
			US 2003-441804P	P 20030121
			US 1998-101867P	P 19980925
			US 1999-404017	B2 19990923

AB The present invention relates to IMAC (Immobilized Metal Affinity Chromatog.). The present invention provides methods of purifying proteins that include a metal ion affinity peptide. The methods generally involve contacting a fusion protein that includes a metal ion affinity peptide with at least two different metal ion chelating resins. In certain representative embodiments, the methods include contacting a fusion protein with a first metal ion chelate resin having a first immobilized metal ion; eluting any bound protein from the first metal ion chelate resin, to produce an eluate; contacting the eluate with a second metal ion chelate resin having a second immobilized metal ion; and eluting any bound protein from the second metal ion chelate resin. Also provided are kits for use in practicing the subject methods. An illustrative purification protocol for Bi-MAC (Bi-Metal Affinity Chromatog.) is shown. The subject methods find use in a variety of protein purification applications.

IT 474426-21-6

RL: PRP (Properties)

(unclaimed sequence; purification of fusion proteins using immobilized bi-metal affinity chromatog.)

L2 ANSWER 4 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN

ED Entered STN: 30 Aug 2004

ACCESSION NUMBER: 2004:706184 CAPLUS

DOCUMENT NUMBER: 141:345966

TITLE: Immobilized cobalt affinity chromatography
 provides a novel, efficient method for herpes
 simplex virus type 1 gene vector purification

AUTHOR(S): Jiang, Canping; Wechuck, James B.; Goins, William
 F.; Krisky, David M.; Wolfe, Darren; Ataii,
 Mohammad M.; Glorioso, Joseph C.

CORPORATE SOURCE: Department of Chemical Engineering, University of
 Pittsburgh, Pittsburgh, PA, USA

SOURCE: Journal of Virology (2004), 78(17), 8994-9006

CODEN: JOVIAM; ISSN: 0022-538X

PUBLISHER: American Society for Microbiology

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Herpes simplex virus type 1 (HSV-1) is a promising vector for gene therapy applications, particularly at peripheral nerves, the natural site of virus latency. Many gene vectors require large particle nos. for even early-phase clin. trials, emphasizing the need for high-yield, scalable manufacturing processes that result in virus prepns. that are nearly free of cellular DNA and protein contaminants. HSV-1 is an enveloped virus that requires the development of gentle purification methods. Ideally, such methods should avoid centrifugation and may employ selective purification processes that rely on the recognition of a unique envelope surface chemical. Here we describe a novel method that fulfills these criteria. An immobilized metal affinity chromatog. (IMAC) method was developed for the selective purification of vectors engineered to display a high-affinity binding peptide. Feasibility studies involving various transition metal ions (Cu²⁺, Zn²⁺, Ni²⁺, and Co²⁺) showed that cobalt had the most desirable features, which include a low level of interaction with either the normal virus envelope or contaminating DNA and proteins. The introduction of a cobalt-specific recognition element into the virus envelope may provide a suitable target for cobalt-dependent purification. To test this possibility, we engineered a peptide with affinity for immobilized cobalt in frame in the heparan sulfate binding domain of HSV-1 glycoprotein B, which is known to be exposed on the surface of the virion particle and recombined into the viral genome. By optimizing the IMAC loading conditions and reducing cobalt ion leakage, we recovered 78% of the tagged HSV-1 recombinant virus, with a >96% reduction in contaminating proteins and DNA.

IT 259678-66-5D, fusion proteins with HSV1 gB

RL: BSU (Biological study, unclassified); BIOL (Biological study) (HSV1 vectors containing; immobilized cobalt affinity chromatog. provides novel, efficient method for herpes simplex virus type 1 gene vector purification)

REFERENCE COUNT: 83 THERE ARE 83 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 5 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN

ED Entered STN: 14 Jan 2003

ACCESSION NUMBER: 2003:29500 CAPLUS

DOCUMENT NUMBER: 138:84441

TITLE: PCR amplification of template DNA for cell-free protein synthesis system

INVENTOR(S): Motoda, Yoko; Yabuki, Takashi; Kikawa, Takanori; Yokoyama, Shigeyuki

PATENT ASSIGNEE(S): Institute of Physical and Chemical Research, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 17 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003009880	A2	20030114	JP 2001-201356	20010702
CA 2452396	AA	20030116	CA 2002-2452396	20020624
WO 2003004703	A1	20030116	WO 2002-JP6261	20020624

W: CA, US

RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC,

Searcher : Shears 571-272-2528

10/762588

NL, PT, SE, TR
EP 1411131 A1 20040421 EP 2002-736176 20020624
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,
PT, IE, FI, CY, TR
US 2004214292 A1 20041028 US 2003-748055 20031231
PRIORITY APPLN. INFO.: JP 2001-201356 A 20010702
WO 2002-JP6261 W 20020624

AB A process for producing template DNA for use in cell-free protein synthesis by DNA amplification, is provided. A first double-stranded DNA (dsDNA) coding for a protein, a second dsDNA overlapping at the 5' end, a third dsDNA overlapping at the 3' end, a sense primer hybridizable to the 5' end of the second dsDNA, an antisense primer hybridizable to the 3' end of the 3rd dsDNA, are used for polymerase chain reaction (PCR). Single-stranded DNA can also be used in place of dsDNA. Use of a terminator sequence and peptide tag such as maltose-binding protein, cellulose-binding domain, glutathione-S-transferase, thioredoxin, streptavidin-binding peptide, or histidine-containing peptide, is claimed. Expression of Ras protein in cell-free protein synthesis system using the native histidine tag present in the N-terminal of chicken muscle lactate dehydrogenase, T7 promoter, and T7 terminator, is described. Chloramphenicol acetyltransferase, and 10 arbitrarily chosen clones from mouse full-length cDNA library were also expressed. By using this process, a desired polypeptide can be synthesized within a short period of time at a high yield and at a low cost, compared with the conventional processes.

IT 484053-89-6

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(amino acid sequence; PCR amplification of template DNA for cell-free protein synthesis system)

L2 ANSWER 6 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN

ED Entered STN: 14 Jan 2003

ACCESSION NUMBER: 2003:29497 CAPLUS

DOCUMENT NUMBER: 138:84439

TITLE: PCR amplification of template DNA for cell-free protein synthesis system

INVENTOR(S): Motoda, Yoko; Yabuki, Takashi; Kikawa, Takanori; Yokoyama, Shigeyuki

PATENT ASSIGNEE(S): Institute of Physical and Chemical Research, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 17 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003009877	A2	20030114	JP 2001-200676	20010702
PRIORITY APPLN. INFO.:			JP 2001-200676	20010702

AB A process for producing template DNA for use in cell-free protein synthesis by DNA amplification, is provided. A first double-stranded DNA (dsDNA) coding for a protein, a second dsDNA overlapping at the 5' end, a third dsDNA overlapping at the 3' end, a sense primer

Searcher : Shears 571-272-2528

hybridizable to the 5' end of the second dsDNA; an antisense primer hybridizable to the 3' end of the 3rd dsDNA, are used for polymerase chain reaction (PCR). Single-stranded DNA can also be used in place of dsDNA. Use of a terminator sequence and peptide tag such as maltose-binding protein, cellulose-binding domain, glutathione-S-transferase, thioredoxin, streptavidin-binding peptide, or histidine-containing peptide, is claimed. Expression of Ras protein in cell-free protein synthesis system using the native histidine tag present in the N-terminal of chicken muscle lactate dehydrogenase, T7 promoter, and T7 terminator, is described. Chloramphenicol acetyltransferase, and 10 arbitrarily chosen clones from mouse full-length cDNA library were also expressed. By using this process, a desired polypeptide can be synthesized within a short period of time at a high yield and at a low cost, compared with the conventional processes.

IT 484053-89-6

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(amino acid sequence; PCR amplification of template DNA for cell-free protein synthesis system)

L2 ANSWER 7 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN

ED Entered STN: 05 Jan 2003

ACCESSION NUMBER: 2003:5975 CAPLUS

DOCUMENT NUMBER: 138:69467

TITLE: Water-soluble polymeric metal ion affinity compositions, method for their preparation and use in homogeneous and heterogeneous determination and purification

INVENTOR(S): Tchaga, Grigoriy S.

PATENT ASSIGNEE(S): Clontech Laboratories, Inc., USA

SOURCE: PCT Int. Appl., 36 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003000708	A1	20030103	WO 2002-US19879	20020620
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
CA 2447594	AA	20030103	CA 2002-2447594	20020620
US 2003023037	A1	20030130	US 2002-176955	20020620
US 6703498	B2	20040309		
EP 1397372	A1	20040317	EP 2002-742266	20020620
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR			
JP 2005517152	T2	20050609	JP 2003-507111	20020620

10/762588

PRIORITY APPLN. INFO.:

US 2001-300336P P 20010621

WO 2002-US19879 W 20020620

AB Water-soluble metal ion affinity compds. and methods for using the same are provided. The subject compds. include an aspartate based metal chelating ligand bonded to a water-soluble polymeric substrate, where the ligand is complexed with a metal ion. In certain embodiments, the subject compds. further include a member of a signal producing system, e.g., a directly or an indirectly detectable label moiety. Also provided are water-insol. supports having the subject compds. present on, e.g., immobilized on, at least one surface thereof. The subject compds. find use in a variety of different applications, including analyte detection and analyte purification applications.

IT 474426-21-6

RL: PRP (Properties)

(unclaimed sequence; water-soluble polymeric metal ion affinity compns., method for their preparation and use in homogeneous and heterogeneous determination and purification)

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 8 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN

ED Entered STN: 08 Nov 2002

ACCESSION NUMBER: 2002:850241 CAPLUS

DOCUMENT NUMBER: 137:365958

TITLE: Metal ion affinity peptides and methods for using the same in protein purification methods

INVENTOR(S): Tchaga, Grigoriy S.; Jokhadze, George G.

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 23 pp., Cont.-in-part of U. S. Ser. No. 404,017, abandoned.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002164718	A1	20021107	US 2001-858332	20010515
US 2004180415	A1	20040916	US 2004-762588	20040121
PRIORITY APPLN. INFO.:			US 1998-101867P	P 19980925
			US 1999-404017	B2 19990923
			US 2001-858332	A2 20010515
			US 2003-441804P	P 20030121

OTHER SOURCE(S): MARPAT 137:365958

AB The present invention provides metal ion affinity peptides, fusion proteins comprising metal ion affinity peptides, and polynucleotides encoding the fusion proteins. The invention further provides recombinant vectors comprising subject polynucleotides, and host cells comprising the recombinant vectors. The invention further provides methods and kits for purifying a fusion protein comprising a metal ion affinity peptide.

Searcher : Shears 571-272-2528

IT 474426-21-6
RL: ARG (Analytical reagent use); PRP (Properties); ANST (Analytical study); USES (Uses)
(amino acid sequence; metal ion affinity peptides and methods for using the same in protein purification methods)

IT 475131-37-4
RL: PRP (Properties)
(unclaimed sequence; metal ion affinity peptides and methods for using the same in protein purification methods)

L2 ANSWER 9 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN

ED Entered STN: 09 Dec 1999

ACCESSION NUMBER: 1999:779602 CAPLUS

DOCUMENT NUMBER: 132:177550

TITLE: Natural poly-histidine affinity tag for purification of recombinant proteins on cobalt(II)-carboxymethylaspartate crosslinked agarose

AUTHOR(S): Chaga, G.; Bochkariov, D. E.; Jokhadze, G. G.; Hopp, J.; Nelson, P.

CORPORATE SOURCE: Clontech Laboratories, Inc., Palo Alto, CA, USA

SOURCE: Journal of Chromatography, A (1999), 864(2), 247-256

CODEN: JCRAEY; ISSN: 0021-9673

PUBLISHER: Elsevier Science B.V.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A natural 19-amino-acid poly-histidine affinity tag was cloned at the N-terminus of three recombinant proteins. The vectors containing the DNA of the fusion proteins were used for transformation of Escherichia coli DH5 α cells. Each protein was expressed, extracted and purified in one chromatog. step. The purification procedure for each protein can be accomplished in less than 1 h. A new type of immobilized metal ion affinity chromatog. adsorbent - Co²⁺-carboxymethylaspartate agarose Superflow - was utilized at linear flow-rates as high as 5 cm/min. The final preparation of each protein is with purity greater than 95% as ascertained by SDS-electrophoresis. Recovery for each purified protein was higher than 77% of the initial loaded amount as judged by biol. activity. The operational capacity of Co²⁺-carboxymethylaspartate agarose for each protein was determined

IT 259678-66-5P
RL: BPN (Biosynthetic preparation); PUR (Purification or recovery); BIOL (Biological study); PREP (Preparation)
(polyhistidine affinity tag (HAT); natural poly-histidine affinity tag for purification of recombinant proteins on cobalt(II)-carboxymethylaspartate crosslinked agarose)

REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 10 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN

ED Entered STN: 19 Nov 1999

ACCESSION NUMBER: 1999:736412 CAPLUS

DOCUMENT NUMBER: 131:348793

TITLE: Compositions and methods for protein purification based on a metal ion affinity site

INVENTOR(S): Tchaga, Grigoriy; Jokhadze, George G.

PATENT ASSIGNEE(S): Clontech Laboratories, Inc., USA

SOURCE: PCT Int. Appl., 42 pp.

DOCUMENT TYPE: CODEN: PIXXD2
 LANGUAGE: Patent
 FAMILY ACC. NUM. COUNT: 1 English
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9957992	A1	19991118	WO 1999-US10662	19990514
W: AU, CA, JP				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
AU 9941877	A1	19991129	AU 1999-41877	19990514
PRIORITY APPLN. INFO.:			US 1998-78687	A 19980514
			WO 1999-US10662	W 19990514

AB The present invention describes introducing metal ion affinity sequences into recombinant proteins to allow for purification and/or immobilization of these proteins. The present invention provides a fusion protein, comprising: a protein of interest fused at its amino-terminus or carboxy-terminus to at least one affinity peptide, said fusion protein having a formula R1-(HX_n)_m-R2, wherein R1 or R2 is said protein of interest, n = 1-8, m = 2-30, and wherein if n = 1 for more than two adjacent units of HX, at least one X must be asparagine, phenylalanine, tryptophan, tyrosine, lysine, methionine, arginine, glutamine, or cysteine.

IT 250266-36-5P

RL: BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); PUR (Purification or recovery); RCT (Reactant); BIOL (Biological study); PREP (Preparation); PROC (Process); RACT (Reactant or reagent)
 (comps. and methods for protein purification based on a metal ion affinity site)

IT 250662-75-0 250676-82-5

RL: PRP (Properties)
 (unclaimed protein sequence; comps. and methods for protein purification based on a metal ion affinity site)

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 11 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN

ED Entered STN: 31 May 1991

ACCESSION NUMBER: 1991:200707 CAPLUS

DOCUMENT NUMBER: 114:200707

TITLE: Nucleotide and deduced amino acid sequences of chicken lactate dehydrogenase-A

AUTHOR(S): Hirota, Y.; Katsumata, A.; Takeya, T.

CORPORATE SOURCE: Inst. Chem. Res., Kyoto Univ., Uji, Japan

SOURCE: Nucleic Acids Research (1990), 18(21), 6432

CODEN: NARHAD; ISSN: 0305-1048

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A cDNA clone carrying the lactate dehydrogenase A chain (LDH-A) from a chicken embryo fibroblasts cDNA library was isolated by differential hybridization and sequenced the expression of the LDH-A was increased 8-fold in CEF transformed by Rous sarcoma virus. The cDNA clone is 1575 bp long; it consists of a 59 bp 5' noncoding region, a 996-bp

coding region, and a 520 bp 3'-noncoding region, a 996-bp coding region, and a 520-bp 3' noncoding region. The deduced amino acid sequence is identical to the sequence determined by amino acid sequencing except at 2 residues; Leu-63 and Ile-78 instead of Met-63 and Thr-78, resp. To investigate the origins of these changes, the nucleotide sequences of the corresponding regions on the genomic clones were analyzed and the genomic sequences of amino acid position 63 and 78 were ACG (Thr) and ACA (Thr), resp. It thus seems likely that misincorporations occurred at both positions during the cloning process and that the still remaining difference at position 63 (Leu-63 and Thr-63) might be due to other reasons, such as the difference of strain used.

IT 133556-98-6

RL: PRP (Properties)
(amino acid sequence of)

L2 ANSWER 12 OF 12 CAPLUS COPYRIGHT 2006 ACS on STN

ED Entered STN: 12 May 1984

ACCESSION NUMBER: 1979:50551 CAPLUS

DOCUMENT NUMBER: 90:50551

TITLE: The primary structures of chicken lactate dehydrogenase M4 and H4 isoenzymes

AUTHOR(S): Torff, Hans Joachim; Becker, Dagobert; Schwarzwaelder, Johanna

CORPORATE SOURCE: Inst. Biophys. Phys. Biochem., Univ. Regensburg, Regensburg, Fed. Rep. Ger.

SOURCE: FEBS-Symposium (1977), 49(Pyridine Nucleotide - Dependent Dehydrogenases), 31-42
CODEN: FEBSDB; ISSN: 0071-4402

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The amino acid sequences of chicken lactate dehydrogenase isoenzymes M4 and H4 are presented and compared with those of the pig isoenzymes. Comparison of chicken M and H chain sequences with each other shows that 252 (76%) of the residues occur in identical sequence. Nonidentical residues are not spread statistically over the sequence but are accumulated at the N- and C-termini. Sequences representing active site domains show only 1 or 2 substitutions in sequences up to 20 and more amino acids. A comparison of the pig and chicken sequences shows that 66% of the positions are identical. However, if only the H4 isoenzymes of pig and chicken are compared, .apprx.90% of the sequence are identical and the C-terminal 34 amino acid residues show only 2 substitutions. The longest sequence of identical residues in both types of enzymes includes the loop region which undergoes a conformational change upon substrate binding.

IT 68939-01-5

RL: PRP (Properties); BIOL (Biological study)
(amino acid sequence of)

FILE 'MEDLINE' ENTERED AT 12:16:55 ON 13 FEB 2006

FILE 'BIOSIS' ENTERED AT 12:16:55 ON 13 FEB 2006

Copyright (c) 2006 The Thomson Corporation

FILE 'EMBASE' ENTERED AT 12:16:55 ON 13 FEB 2006

Copyright (c) 2006 Elsevier B.V. All rights reserved.

L3

0 L1

10/762588

=> fil hom

FILE 'HOME' ENTERED AT 12:17:03 ON 13 FEB 2006

Searcher : Shears 571-272-2528

10/762588

=> d his ful

(FILE 'HOME' ENTERED AT 12:15:12 ON 13 FEB 2006)
DEL HIS Y

L1 FILE 'REGISTRY' ENTERED AT 12:16:00 ON 13 FEB 2006
10 SEA ABB=ON PLU=ON HLIHNVHKEEHAHAHN/SQSP

FILE 'REGISTRY' ENTERED AT 12:16:41 ON 13 FEB 2006
D L1 1-10 .BEVREG1

L2 FILE 'CAPLUS' ENTERED AT 12:16:45 ON 13 FEB 2006
12 SEA ABB=ON PLU=ON L1
D 1-12 .BEVSTR

L3 FILE 'MEDLINE, BIOSIS, EMBASE' ENTERED AT 12:16:55 ON 13 FEB 2006
0 SEA ABB=ON PLU=ON L1

FILE 'HOME' ENTERED AT 12:17:03 ON 13 FEB 2006

FILE REGISTRY

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 12 FEB 2006 HIGHEST RN 874108-28-8
DICTIONARY FILE UPDATES: 12 FEB 2006 HIGHEST RN 874108-28-8

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2005

Please note that search-term pricing does apply when conducting SmartSELECT searches.

*
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added, *
* effective March 20, 2005. A new display format, IDERL, is now *
* available and contains the CA role and document type information. *
*

Structure search iteration limits have been increased. See HELP SLIMI for details.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/ONLINE/UG/regprops.html>

FILE CAPLUS

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December

10/762588

26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 13 Feb 2006 VOL 144 ISS 8
FILE LAST UPDATED: 12 Feb 2006 (20060212/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply. They are available for your review at:

<http://www.cas.org/infopolicy.html>

FILE MEDLINE

FILE LAST UPDATED: 11 FEB 2006 (20060211/UP). FILE COVERS 1950 TO DA

On December 11, 2005, the 2006 MeSH terms were loaded.

The MEDLINE reload for 2006 will soon be available. For details on the 2005 reload, enter HELP RLOAD at an arrow prompt (=>). See also:

<http://www.nlm.nih.gov/mesh/>
http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html
http://www.nlm.nih.gov/pubs/techbull/nd05/nd05_med_data_changes.ht
http://www.nlm.nih.gov/pubs/techbull/nd05/nd05_2006_MeSH.html

OLDMEDLINE is covered back to 1950.

MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2006 vocabulary.

This file contains CAS Registry Numbers for easy and accurate

FILE BIOSIS

FILE COVERS 1969 TO DATE.

CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT
FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 8 February 2006 (20060208/ED)

FILE EMBASE

FILE COVERS 1974 TO 9 Feb 2006 (20060209/ED)

EMBASE has been reloaded. Enter HELP RLOAD for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE HOME